



U.S. ENVIRONMENTAL PROTECTION AGENCY
 Office of Pesticide Programs
 Biopesticides and Pollution Prevention Division (7511P)
 1200 Pennsylvania Ave., N.W.
 Washington, D.C. 20460

EPA Reg. Number:

62719-716

Date of Issuance:

2/14/2017

NOTICE OF PESTICIDE:

Registration
 Reregistration
 (under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

PowerCore™ Ultra Enlist™
 Refuge Advanced

Name and Address of Registrant (include ZIP Code):

Dow AgroSciences LLC
 9330 Zionsville Road
 Indianapolis, IN 46268-1054

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product, always refer to the above EPA Registration Number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA or the Act).

Registration is in no way to be construed as an endorsement or recommendation of this product by the U.S. Environmental Protection Agency (EPA). In order to protect health and the environment, the Administrator, on his or her motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under the Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration or registration review of PowerCore™ Ultra Enlist™ Refuge Advanced when the EPA requires all registrants of similar products to submit such data.
2. The subject registration will automatically expire at midnight on February 28, 2029.

Signature of Approving Official:

Alan Reynolds, Team Leader
 Microbial Pesticides Branch
 Biopesticides and Pollution Prevention Division (7511P)
 Office of Pesticide Programs

Date:

2/14/2017

3. Make the following labeling change before you release this product for shipment:
 - Revise the EPA Registration Number to read, “EPA Reg. No. 62719-716.”
4. The subject registration will be limited to a seed mix of MON 89034 field corn [*Bacillus thuringiensis* Cry1A.105 and Cry2Ab2 proteins and the genetic material (plasmid insert PV-ZMIR245) necessary for their production] x TC1507 [*Bacillus thuringiensis* Cry1F protein and the genetic material (plasmid insert PHP8999) necessary for its production] x MIR162 [*Bacillus thuringiensis* Vip3Aa20 protein and the genetic material (plasmid insert pNOV1300) necessary for its production] corn seed blended with no less than 5% non-*Bt* corn seed and will have the OECD Unique Identifier: MON-89034-3 x DAS-01507-1 x SYN-IR162-4.
5. Dow AgroSciences must commit to do the following Insect Resistance Management (IRM) Program, consisting of the following elements:
 - Requirements relating to a refuge assurance program for ensuring the correct refuge blend percentage;
 - Requirements relating to creation of a non-*Bacillus thuringiensis* (*Bt*) corn refuge in cotton growing areas in conjunction with the planting of any acreage of PowerCore™ Ultra Enlist™ Refuge Advanced.
 - Requirements for Dow AgroSciences to prepare and require PowerCore™ Ultra Enlist™ Refuge Advanced users to sign grower agreements that impose binding contractual obligations on growers to comply with the growing requirements.
 - Requirements for Dow AgroSciences to develop, implement, and report to EPA on programs to educate growers about IRM for seed blends.
 - Requirements for Dow AgroSciences to develop, implement, and report to EPA on monitoring programs to evaluate whether there are statistically significant and biologically relevant changes in susceptibility to the Cry1A.105, Cry2Ab2, Cry1F, and Vip3Aa20 proteins in the target insects.
 - Requirements for Dow AgroSciences to develop, and if triggered, to implement a remedial action plan that would contain measures the company would take in the event that any field-relevant insect resistance to Cry1A.105, Cry2Ab2, Cry1F, or Vip3Aa20 was detected, as well as to report on activity under the plan to EPA.
 - Requirements for Dow AgroSciences to make available to the Agency upon request records of the number of units of PowerCore™ Ultra Enlist™ Refuge Advanced sold or shipped and not returned, and the number of such units that were sold to persons who have signed grower agreements for the previous growing season, within three months of the request.

- Requirements for Dow AgroSciences, on or before August 31st of each year, to submit reports on Cry1A.105, Cry2Ab2, Cry1F, and Vip3Aa20 resistance monitoring.
 - Bag Tag Requirements for PowerCore™ Ultra Enlist™ Refuge Advanced. Seed bags and/or bag tags for corn hybrids that contain plant-incorporated protectants produced in PowerCore™ Ultra Enlist™ Refuge Advanced must display the registration number and active ingredients, and stipulate that growers read the Dow AgroSciences Stewardship Guide (or equivalent guidance) prior to planting these hybrids. The refuge size requirement must be displayed on the bag or bag tag in both text and graphic format.
6. Implement the following Insect Resistance Management (IRM) Program for PowerCore™ Ultra Enlist™ Refuge Advanced:

a) Corn-Belt/Non-Cotton Growing Areas

PowerCore™ Ultra Enlist™ Refuge Advanced contains a Lepidopteran refuge that is “in the bag” and is automatically implemented when the grower plants the product. No additional refuge is required when planting this product.

Foliar insecticide treatments for control of European corn borer, corn earworm, southwestern corn borer, fall armyworm, black cutworm, beet armyworm, dingy cutworm, western bean cutworm, lesser corn stalk borer, southern corn stalk borer, stalk borer and sugarcane borer may be applied only if economic thresholds are reached for one or more of these target pests. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g., Extension Service agents, crop consultants).

b) Cotton-Growing Region Refuge Requirements

In cotton-growing regions where corn earworm is a significant pest:

- A 20% refuge must be planted with non-*Bt* corn hybrids.
- PowerCore™ Ultra Enlist™ Refuge Advanced and the 20% non-*Bt* refuge should be sown on the same day, or with the shortest window possible between planting dates.
- External refuges may be planted as an in-field or adjacent (e.g., across the road) refuge or as a separate block within 1/2 mile of the PowerCore™ Ultra Enlist™ Refuge Advanced field.
- In field refuge options include: blocks, perimeter strips (i.e., along the edges or headlands), or in-field strips.
- When planting the refuge in strips across the field, refuges must be at least four (4)

rows wide.

- Insecticide treatments for control of European corn borer, corn earworm, southwestern corn borer, fall armyworm, black cutworm, beet armyworm, dingy cutworm, western bean cutworm, lesser corn stalk borer, southern corn stalk borer, stalk borer and sugarcane borer may be applied only if economic thresholds are reached for one or more of these target pests. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g., Extension Service agents, crop consultants). Microbial *Bt* insecticides must not be applied to non-*Bt* corn refuge plants.
- Cotton-growing areas include the following states: Alabama, Arkansas, Georgia, Florida, Louisiana, North Carolina, Mississippi, South Carolina, Oklahoma (only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita), Tennessee (only the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton), Texas (except the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman), Virginia (only the counties of Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex) and Missouri (only the counties of Dunklin, New Madrid, Pemiscot, Scott, and Stoddard).
- When on-farm assessments identify non-compliance with refuge requirements for one or more *Bt* corn products, additional educational material and assistance must be provided by Dow AgroSciences to help these growers meet the refuge requirements across their farming operations.

c) Grower Agreements for PowerCore™ Ultra Enlist™ Refuge Advanced

1. Persons purchasing PowerCore™ Ultra Enlist™ Refuge Advanced must sign a grower agreement. The term grower agreement refers to any grower purchase contract, license agreement or similar legal document.
2. The grower agreement and/or specific stewardship documents referenced in the grower agreement must clearly set forth the terms of the current IRM program. By signing the grower agreement, a grower must be contractually bound to comply with the requirements of the IRM program.
3. Dow AgroSciences must integrate this registration into the current system used for its other *Bt* corn plant-incorporated protectants, which is reasonably likely to assure that persons purchasing PowerCore™ Ultra Enlist™ Refuge Advanced will affirm annually that they are contractually bound to comply with the requirements of the IRM program.

4. Dow AgroSciences must integrate this registration into the current system used for its other *Bt* corn plant-incorporated protectants, which is reasonably likely to assure that persons purchasing PowerCore™ Ultra Enlist™ Refuge Advanced sign grower agreement(s).
5. Dow AgroSciences shall maintain records of all PowerCore™ Ultra Enlist™ Refuge Advanced grower agreements for a period of three (3) years from December 31st of the year in which the agreement was signed.
6. Dow AgroSciences shall make available to the Agency upon request records of the number of units of PowerCore™ Ultra Enlist™ Refuge Advanced seed sold or shipped and not returned, and the number of such units that were sold to persons who have signed grower agreements for the previous growing season, within three months of the request.
7. Dow AgroSciences must allow a review of the grower agreements and grower agreement records by EPA or by a State pesticide regulatory agency if the State agency can demonstrate that confidential business information, including names, personal information, and grower license numbers of the growers, will be protected.

d) IRM Education and Compliance Monitoring Programs for PowerCore™ Ultra Enlist™ Refuge Advanced

1. Dow AgroSciences must implement and enhance a comprehensive, ongoing IRM education program designed to convey to PowerCore™ Ultra Enlist™ Refuge Advanced users the importance of complying with the IRM program. The program must also address unexpected pest damage and guidance for growers in this area. The education program shall involve the use of multiple media, *e.g.* face-to-face meetings, mailing written materials, EPA-reviewed language on IRM requirements on the bag or bag tag, and electronic communications such as by internet, radio, or television commercials. Copies of the materials will be provided to EPA for their records. The program shall involve at least one written communication annually to each PowerCore™ Ultra Enlist™ Refuge Advanced user separate from the grower technical guide. The communication shall inform the user of the current IRM requirements and specifically the need to plant a lepidopteran refuge in cotton-growing regions. Dow AgroSciences shall coordinate its education program with the educational efforts of other registrants and other organizations, such as the National Corn Growers Association and state extension programs.
2. Dow AgroSciences must conduct targeted, on-farm compliance assessments for growers who purchase PowerCore™ Ultra Enlist™ Refuge Advanced seed to ensure growers are compliant with the requirement of a 20% refuge for lepidopteran pests in cotton-growing areas. Results of these on-farm surveys must be reported separately from non-seed blended products.

Dow AgroSciences must provide, in conjunction with other Dow AgroSciences PIP products, a report to EPA summarizing the PowerCore™ Ultra Enlist™ Refuge Advanced compliance assurance program activities and results for the prior year and plans for the PowerCore™ Ultra Enlist™ Refuge Advanced compliance assurance program for the current year, annually by January 31st. Within one month of submitting this report to EPA, Dow AgroSciences shall meet with EPA to discuss its findings. The report must inform EPA of the number of growers deemed ineligible to purchase *Bt* corn seed on the basis of continued non-compliance with the insect resistance management refuge requirements.

3. Dow AgroSciences shall implement and enhance its education program to take into account the information collected through the compliance survey and from other sources. The changes shall address aspects of grower compliance that are not sufficiently high.
4. Dow AgroSciences must maintain and provide to the Agency upon request, substantive changes to educational programs within three months of the Agency's request.
5. Dow AgroSciences shall revise and expand its existing Compliance Assurance Program to include the following elements: Dow AgroSciences must prepare and submit a written description of its revised Compliance Assurance Program. Dow AgroSciences may coordinate with other registrants in designing and implementing its Compliance Assurance Program.
6. Dow AgroSciences will enhance the refuge education program throughout the seed delivery channel to:
 - i. Ensure sales representatives, licensees, seed dealers, and growers recognize the importance of correct refuge implementation and potential consequences of failure to plant the required refuge.
7. Dow AgroSciences will focus the majority of on-farm assessments on regions with the greatest risks for resistance:
 - i. Use *Bt* corn adoption, pest pressure information, and other available information to identify regions where the risk of resistance is greatest;
 - ii. Focus approximately two-thirds of on-farm assessments on these regions, with the remaining assessments conducted across other regions where PowerCore™ Ultra Enlist™ Refuge Advanced is used.
8. Dow AgroSciences will use its available PowerCore™ Ultra Enlist™ Refuge Advanced sales records and other information to refine grower lists for on-farm

assessments of their compliance with refuge requirements:

- i. Identify for potential on-farm assessment growers whose sales information indicates they have purchased PowerCore™ Ultra Enlist™ Refuge Advanced but may have purchased little or no refuge seed from the registrant, licensee, or affiliated companies.
9. Dow AgroSciences will contract with third parties to perform on-farm assessments of compliance with refuge requirements:
 - i. A third party is classified as a party other than the registrant, the grower, or anyone else with a direct interest in IRM compliance for *Bt* corn.
 - ii. The third-party assessors will conduct all first-time on-farm assessments as well as second-year on-farm assessments of those growers found out of compliance in a first-time assessment.
10. Dow AgroSciences will annually refine the on-farm assessment program for PowerCore™ Ultra Enlist™ Refuge Advanced to reflect the adoption rate and level of refuge compliance for PowerCore™ Ultra Enlist™ Refuge Advanced.
11. Dow AgroSciences will follow up with growers who have been found significantly out of compliance under the on-farm assessment program and are found to be back in compliance the following year:
 - i. All growers found to be significantly out of compliance in a prior year will annually be sent additional refuge assistance information for a minimum of two years by Dow AgroSciences, a seed supplier, or a third party assessor, after completing the assessment process;
 - ii. Dow AgroSciences will conduct follow-up checks on growers found to be significantly out of compliance within three years after they are found to be back in compliance;
 - iii. A grower found with a second incident of significant non-compliance with refuge requirements for PowerCore™ Ultra Enlist™ Refuge Advanced within a five-year period will be denied access to Dow AgroSciences' *Bt* corn products the next year. Similarly, seed dealers who are not fulfilling their obligations to inform/educate growers of their IRM obligations will lose their opportunity to sell *Bt* corn.

e) Insect Resistance Monitoring and Remedial Action Plan for PowerCore™ Ultra Enlist™ Refuge Advanced

EPA is imposing the following conditions for Cry1A.105, Cry2Ab2, Cry1F, and

Vip3Aa20 toxins expressed in PowerCore™ Ultra Enlist™ Refuge Advanced:

Dow AgroSciences will monitor for resistance to its lepidopteran-resistant *Bt* corn. The monitoring program shall consist of three approaches: (1) focused population sampling and laboratory testing; (2) investigation of reports of less-than expected control of labeled insects; and (3) should field-relevant resistance be confirmed, an appropriate resistance management action plan will be implemented.

(1) Focused Population Sampling

Dow AgroSciences shall annually sample and bioassay populations of the key target pests *Ostrinia nubilalis* (European corn borer; ECB), *Diatraea grandiosella* (Southwestern corn borer; SWCB), and *Helicoverpa zea* (corn earworm; CEW). Sampling for the target pests will be focused in areas identified as those with the highest risk of resistance development (e.g., where lepidopteran-active *Bt* hybrids are planted on a high proportion of the corn acres, and where the insect species are regarded as key pests of corn). Bioassay methods must be appropriate for the goal of detecting field-relevant shifts in population response to lepidopteran resistant *Bt* corn and/or changes in resistance allele frequency in response to the use of *Bt* corn and, as far as possible, should be consistent across sampling years to enable comparisons with historical data.

The number of populations to be collected shall reflect the regional importance of the insect species as a pest, and specific collection regions will be identified for each pest. For ECB, a minimum of 12 populations across the sampling region will be targeted for collection at each annual sampling. For SWCB, the target will be a minimum of six populations. For CEW, the target will be a minimum of 10 populations. Pest populations should be collected from multiple corn-growing states reflective of different geographies and agronomic conditions. To obtain sufficient sensitivity to detect resistance alleles before they become common enough to cause measurable field damage, each population collection shall attempt to target 400 insect genomes (egg masses, larvae, mated females, and/or mixed-sex adults), but a successful population collection will contain a minimum of 100 genomes. It is recognized that it may not be possible to collect the target number of insect populations or genomes due to factors such as natural fluctuations in pest density, environmental conditions, and area-wide pest suppression.

The sampling program and geographic range of collections may be modified as appropriate based on changes in pest importance and for the adoption levels of lepidopteran-resistant *Bt* corn. The Agency shall be consulted prior to the implementation of such modifications.

Dow AgroSciences will report to the Agency before August 31st each year the results of the population sampling and bioassay monitoring program.

Any incidence of unusually low sensitivity to the *Bt* protein in bioassays shall be investigated as soon as possible to understand any field relevance of such a finding. Such investigations shall proceed in a stepwise manner until the field relevance can be either confirmed or refuted, and results of these shall be reported to the Agency annually before August 31st. The investigative steps will include:

1. Re-test progeny of the collected population to determine whether the unusual bioassay response is reproducible and heritable. If it is not reproducible and heritable, no further action is required.
2. If the unusual response is reproducible and heritable, progeny of insects that survive the diagnostic concentration will be tested using methods that are representative of exposure to *Bt* corn hybrids under field conditions. If progeny do not survive to adulthood, any suspected resistance is not field relevant and no further action is required.
3. If insects survive steps 1 and 2, resistance is confirmed, and further steps will be taken to evaluate the resistance. These steps may include:
 - Determining the nature of the resistance (*i.e.*, recessive or dominant, and the level of functional dominance);
 - Estimating the resistance-allele frequency in the original population;
 - Determining whether the resistance-allele frequency is increasing by analyzing field collections in subsequent years sampled from the same site where the resistance allele(s) was originally collected;
 - Determining the geographic distribution of the resistance allele by analyzing field collections in subsequent years from sites surrounding the site where the resistance allele(s) was originally collected.

Should field-relevant resistance be confirmed, and the resistance appears to be increasing or spreading, Dow AgroSciences will consult with the Agency to develop and implement a case-specific resistance management action plan.

(2) Investigation of Reports of Unexpected Levels of Damage by the Target Pests

Dow AgroSciences will follow up on grower, extension specialist or consultant reports of unexpected levels of damage by the lepidopteran pests listed on the pesticide label. Dow AgroSciences will instruct its customers to contact them if such incidents occur. Dow AgroSciences will investigate all legitimate reports submitted to the company or the company's representatives.

If reports of unexpected levels of damage lead to the suspicion of resistance in any of the key target pests (ECB, SWCB, and CEW), Dow AgroSciences will implement the actions described below, based on the following definitions of *suspected resistance* and *confirmed resistance*.

Suspected resistance

EPA defines *suspected resistance* to mean field reports of unexpected levels of insect feeding

damage for which:

- The corn in question has been confirmed to be lepidopteran-active *Bt* corn;
- The seed used had the proper percentage of corn expressing *Bt* protein;
- The relevant plant tissues are expressing the expected level of *Bt* protein; and
- It has been ruled out that species not susceptible to the protein could be responsible for the damage, that no climatic or cultural reasons could be responsible for the damage, and that that there could be no other reasonable causes for the damage.

The Agency does not interpret *suspected resistance* to mean grower reports of possible control failures or suspicious results from annual insect monitoring assays, nor does the Agency intend that extensive field studies and testing be undertaken to confirm scientifically the presence of insects resistant to *Bt* corn in commercial production fields before responsive measures are undertaken.

If resistance is *suspected*, Dow AgroSciences will instruct growers to do the following:

- Use alternative control measures in the *Bt* corn fields in the affected region to control the target pest during the immediate growing season.
- Destroy *Bt* corn crop residues in the affected region within one month after harvest with a technique appropriate for local production practices to minimize the possibility of resistant insects over-wintering and contributing to the next season's target pest population.

Additionally, if possible, and prior to the application of alternative control measures or destruction of crop residue, Dow AgroSciences will collect samples of the insect population in the affected fields for laboratory rearing and testing. Such rearing and testing shall be conducted as expeditiously as practical.

Confirmed resistance

EPA defines *confirmed resistance* to mean, in the case of field reports of unexpected levels of damage from the key target pests, that all the following criteria are met:

- There is >30% insect survival and commensurate insect feeding in a bioassay, initiated with neonate larvae, that uses methods that are representative of exposure to *Bt* corn hybrids under field conditions (ECB and SWCB only).
- In standardized laboratory bioassays using diagnostic concentrations of the *Bt* protein suited to the target pest in question, the pest exhibits resistance that has a genetic basis and the level of survivorship indicates that there may be a resistance allele frequency of ≥ 0.1 in the sampled population.

- In standardized laboratory bioassays, the LC₅₀ exceeds the upper limit of the 95% confidence interval of the LC₅₀ for susceptible populations surveyed both in the original baselines developed for this pest species and in previous years of field monitoring.

(3) Response to Confirmed Resistance in a Key Target Pest as the Cause of Unexpected Levels of Damage in the Field

When field resistance is *confirmed* (as defined above), the following steps will be taken by the registrant:

- EPA will receive notification within 30 days of resistance confirmation;
- Affected customers and extension agents will be notified about confirmed resistance within 30 days;
- Monitoring will be increased in the affected area and local target pest populations will be sampled annually to determine the extent and impact of resistance;
- If appropriate (depending on the resistant pest species, the extent of resistance, the timing of resistance, and the nature of resistance, and the availability of suitable alternative control measures), alternative control measures will be employed to reduce or control target pest populations in the affected area. Alternative control measures may include advising customers and extension agents in the affected area to incorporate crop residues into the soil following harvest to minimize the possibility of over-wintering insects, and/or applications of chemical insecticides;
- Unless otherwise agreed with EPA, stop sale and distribution of the relevant lepidopteran-active *Bt* corn hybrids in the affected area immediately until an effective local mitigation plan approved by EPA has been implemented;
- Dow AgroSciences will develop a case-specific resistance management action plan within 90 days according to the characteristics of the resistance event and local agronomic needs. Dow AgroSciences will consult with appropriate stakeholders in the development of the action plan, and the details of such a plan shall be approved by EPA prior to implementation;
- Notify affected parties (e.g. growers, consultants, extension agents, seed distributors, university cooperators and state/federal authorities as appropriate) in the region of the resistance situation and approved action plan; and
- In subsequent growing seasons, maintain sales suspension and alternative resistance management strategies in the affected region(s) for the *Bt* corn hybrids that are affected by the resistant population until an EPA-approved local resistance management plan is in place to mitigate the resistance.

A report on results of resistance monitoring and investigations of damage reports must be submitted to the Agency annually by August 31st each year for the duration of the registration.

f) Refuge Assurance Program for PowerCore™ Ultra Enlist™ Refuge Advanced

Dow AgroSciences must implement a Blended Seed Refuge Assurance Program designed to ensure PowerCore™ Ultra Enlist™ Refuge Advanced products are formulated with the appropriate rate of refuge seeds. The program must include the following four elements:

1. Trait purity check on seed lots prior to blending;
2. ISO certified Standard Operating Procedures for the blending process;
3. Calibration of blending equipment; and
4. Records and data retention records for seed blend products.
 - Calibration records – Dow AgroSciences will retain documentation for a specified period of time on the equipment calibration including the procedure, when it was conducted and the results.
 - Blend proportion records (weight and kernel based) - Dow AgroSciences will retain documentation for a specified period of time on the kernel per pound data of the components, the calculations to determine the proportions based on weight and the actual weights that are blended together to make up an PowerCore™ Ultra Enlist™ Refuge Advanced product by seed lot.

All records must be maintained at the Dow AgroSciences blending facility and must be available for the EPA review upon request.

g) Annual Reporting Requirements for PowerCore™ Ultra Enlist™ Refuge Advanced

1. Compliance Assurance Program: compliance assurance program activities, including IRM Grower Survey and on-farm assessment results for the prior year and plans for the compliance assurance program for the current year, on or before January 31st each year;
2. Insect Resistance Monitoring Results: results of monitoring and investigations of damage reports, on or before August 31st each year.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those

claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6. A stamped copy of the labeling is enclosed for your records.

If you have any questions, please contact Wiebke Tapken of my team by phone at (703) 347-0556 or via email at tapken.wiebke@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alan Reynolds', with a stylized flourish at the end.

Alan Reynolds, Team Leader
Microbial Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)
Office of Pesticide Programs

Enclosure

Plant-Incorporated Protectant Label

PowerCore™ Ultra Enlist™ Refuge Advanced

(Alternate Brand Name: PowerCore™ Ultra Refuge Advanced)

(Alternate Brand Name: MON 89034 x TC1507 x MIR162 Insect-Protected Herbicide-Tolerant Corn with Interspersed Refuge)

(OECD Unique Identifier: MON-89Ø34-3 × DAS-Ø15Ø7-1 × SYN-IR162-4)

Active Ingredients:

Bacillus thuringiensis Cry1A.105 protein and the genetic material (vector PV-ZMIR245) necessary for its production in corn event MON 89034 (OECD Unique Identifier: MON-89Ø34-3) ≤ 0.0129%*

Bacillus thuringiensis Cry2Ab2 protein and the genetic material (vector PV-ZMIR245) necessary for its production in corn event MON 89034 (OECD Unique Identifier: MON-89Ø34-3) ≤ 0.00489%*

Bacillus thuringiensis Cry1F protein and the genetic material (vector PHP8999) necessary for its production in corn event TC1507 (OECD Unique Identifier: DAS- Ø15Ø7-1) ≤ 0.00099%*

Bacillus thuringiensis Vip3Aa20 insecticidal protein and the genetic material necessary for its production (vector pNOV1300) in corn event MIR162 (OECD Unique Identifier: SYN-IR162-4) ≤ 0.0098%*

Other Ingredients:

The marker protein, PAT (phosphinothricin acetyl transferase), and the genetic material (vector PHP8999) necessary for its production in corn event TC1507 ≤ 0.00003%*

The marker protein PMI (phosphomannose isomerase), and the genetic material (vector pNOV1300) necessary for its production in corn event MIR162 (OECD Unique Identifier: SYN-IR162-4) ≤ 0.00046%*

*Maximum percent dry weight of forage

KEEP OUT OF REACH OF CHILDREN

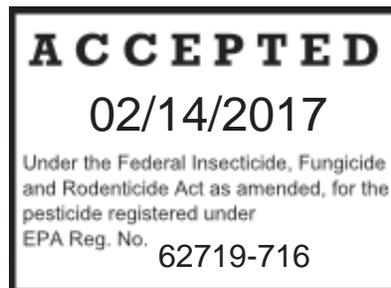
NET CONTENTS _____

CAUTION

EPA Registration No. 62719-xxx

EPA Establishment No. 62719-IN-1

Dow AgroSciences LLC
9330 Zionsville Rd.
Indianapolis, IN 46268



DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. The plant-incorporated protectant (PIP) product must be used as specified in the terms and conditions of the registration.

This plant-incorporated protectant (PIP) may be combined through conventional breeding with other registered plant-incorporated protectants that are similarly approved for use in combination, through conventional breeding, with other registered plant-incorporated protectants to produce inbred corn lines and hybrid corn varieties with combined pesticidal traits.

PowerCore™ Ultra Enlist™ Refuge Advanced protects corn crops from leaf, stalk, and ear damage caused by lepidopteran corn pests listed on this label. In order to minimize the risk of these pests developing resistance to PowerCore™ Ultra Enlist™ Refuge Advanced, an insect resistance management plan must be implemented as defined in the registration terms and conditions.

Grower agreements will specify that growers must adhere to the refuge requirements that will be described in the Product Use Guide for PowerCore™ Ultra Enlist™ Refuge Advanced or other applicable product use documents.

Sales of corn hybrids that contain Bt corn plant-incorporated pesticide(s) must be accompanied by a Product Use Guide which includes information on planting, production, and insect resistance management and notes that routine applications of insecticides to control these insects are usually unnecessary when corn containing the Bt proteins is planted.

Corn seed bags or bag tags for products containing PowerCore™ Ultra Enlist™ Refuge Advanced must include the refuge size requirement in text and graphical format.

INSECT RESISTANCE MANAGEMENT

Growers are instructed to read information on insect resistance management.

These refuge requirements do not apply to seed increase/propagation of inbred and hybrid seed corn up to a total of 20,000 acres per county and up to a combined United States (U.S.) total of 250,000 acres per plant-incorporated protectant (PIP) active ingredient per registrant per year.

The following information regarding refuge placement for commercial production must be included in the Product Use Guide.

This product includes refuge that is interspersed within the field by planting a licensed seed-mixture containing MON 89034 × TC1507 and minimum of 5% non-PIP seed. **The seed mix refuge option for PowerCore™ Ultra Enlist™ Refuge Advanced satisfies the refuge requirements in all regions other than in the cotton growing region where corn earworm is a significant pest as defined below.** The seed producer must ensure a minimum of 5% non-PIP refuge seed is included with the MON 89034 x TC1507 x MIR162 in each lot of seed corn.

The interspersed refuge can only be used by planting seed corn specifically generated by qualified seed producers/conditioners licensed by the registrant.

Additional refuge requirements in the cotton growing region where corn earworm is a significant pest

In the cotton-growing region where corn earworm is a significant pest, as defined below, the seed-mixture containing MON 89034 × TC1507 x MIR162 and a minimum of 5% non-PIP seed requires the planting of an additional 20% structured refuge (i.e. 20 acres of non-Bt corn for every 80 acres of PowerCore™ Ultra Enlist™ Refuge Advanced).

The 20% refuge must be planted with corn hybrids that do not contain Bt technologies for the control of corn rootworms or corn borers. The refuge and the PowerCore™ Ultra Enlist™ Refuge Advanced should be sown on the same day, or with the shortest window possible between planting dates to ensure that corn root development is similar

among varieties. The structured refuge may be planted as an in-field or adjacent (e.g., across the road) refuge, or as a separate block that is within ½ mile of the PowerCore™ Ultra Enlist™ Refuge Advanced. In-field refuge options include blocks, perimeter strips (i.e., strips around the field), or in-field strips. If perimeter or in-field strips are implemented, the strips must be at least 4 consecutive rows wide. The refuge can be protected from lepidopteran damage by use of non-Bt insecticides if the population of one or more target lepidopteran pests of MON 89034 × TC1507 × MIR162 in the refuge exceeds economic thresholds. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g., Extension Service agents, crop consultants).

The cotton-growing region where corn earworm is a significant pest, which requires this additional 20% refuge, consists of the following states: Alabama, Arkansas, Georgia, Florida, Louisiana, North Carolina, Mississippi, South Carolina, Oklahoma (only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita), Tennessee (only the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton), Texas (except the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman), Virginia (only the counties of Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex) and Missouri (only the counties of Dunklin, New Madrid, Pemiscot, Scott, and Stoddard).

The following language will be included on the seed bag tags for PowerCore™ Ultra Enlist™ Refuge Advanced.

Management Guidelines

This product consists of a licensed seed-mixture/seed-blend containing 95% MON 89034 x TC1507 x MIR162 seed and a minimum of 5% seed that does not contain B.t. technologies for the control of corn borers or corn rootworms. When planted, the refuge will be interspersed within the field.

The interspersed refuge configuration in PowerCore™ Ultra Enlist™ Refuge Advanced fulfills the grower's refuge requirements for this product in non-cotton growing regions and in cotton growing regions where corn earworm is not a significant pest.

The interspersed refuge in PowerCore™ Ultra Enlist™ Refuge Advanced is not sufficient to meet IRM requirements in the cotton growing region where corn earworm is a significant pest. In these regions growers are required to plant a structured 20% corn refuge for corn earworm.

In the cotton-growing region where corn earworm is a significant pest, the structured refuge may be planted as an in-field or adjacent (e.g., across the road) refuge or as a separate block that is within ½ mile of the PowerCore™ Ultra Enlist™ Refuge Advanced field. In-field refuge options include blocks, perimeter strips (i.e., strips around the field) or in-field strips. If perimeter strips or in-field strips are implemented, the strips must be at least four consecutive rows of corn wide.

Cotton Growing Region

The cotton-growing region where corn earworm is a significant pest, which requires this additional 20% refuge, consists of the following states: Alabama, Arkansas, Georgia, Florida, Louisiana, North Carolina, Mississippi, South Carolina, Oklahoma (only the counties of Beckham, Caddo, Comanche, Custer, Greer, Harmon, Jackson, Kay, Kiowa, Tillman, and Washita), Tennessee (only the counties of Carroll, Chester, Crockett, Dyer, Fayette, Franklin, Gibson, Hardeman, Hardin, Haywood, Lake, Lauderdale, Lincoln, Madison, Obion, Rutherford, Shelby, and Tipton), Texas (except the counties of Carson, Dallam, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, and Sherman), Virginia (only the counties of Dinwiddie, Franklin City, Greensville, Isle of Wight, Northampton, Southampton, Suffolk City, Surrey, and Sussex) and Missouri (only the counties of Dunklin, New Madrid, Pemiscot, Scott, and Stoddard)

Corn Insects Controlled or Suppressed

European corn borer (ECB)	<i>Ostrinia nubilalis</i>
Southwestern corn borer (SWCB)	<i>Diatraea grandiosella</i>
Southern cornstalk borer (SCSB)	<i>Diatraea crambidoides</i>
Corn earworm (CEW)	<i>Helicoverpa zea</i>
Fall armyworm (FAW)	<i>Spodoptera frugiperda</i>
Stalk borer	<i>Papaipema nebris</i>
Lesser corn stalk borer	<i>Elasmopalpus lignosellus</i>
Sugarcane borer (SCB)	<i>Diatraea saccharalis</i>
Western bean cutworm (WBC)	<i>Richia albicosta</i>
Black cutworm	<i>Agrotis ipsilon</i>

EPA Accepted: _____.